

**Work Order ID 157085**

Monday, February 13, 2017 11:45:11 AM

**\*157085\***

Page 1

Item ID: D4038-041 Accept **\*N900040100\*** Setup Start **\*NS1\***  
Revision ID: Stop **\*NS2\***  
Item Name: Angle Assembly Fwd LH  
Start Date: 2/21/2017 Start Qty: 2.00 **\*2\*** Cust Item ID:  
Required Date: 2/23/2017 Req'd Qty: 2.00 **\*2\*** Customer:  
Reference:

Approvals: Process Plan:  Date: FEB 13 2017 Tooling: Date: Run Start **\*NR1\***  
QC: Date: SPC (Y/N): Date: Stop **\*NR2\***

| Sequence ID/<br>Work Center ID | Operation<br>Description                      | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|-----------------------------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| <b>Draw Nbr</b>                | <b>Revision Nbr</b>                           |                      |         |        |              |               |               |                  |                |
| D4038                          | E                                             |                      |         |        |              |               |               |                  |                |
| 100                            | Pick Kit                                      | 0.00                 |         |        |              |               |               |                  |                |
| <b>*100*</b>                   |                                               |                      |         |        |              |               |               |                  |                |
| Packaging                      | Memo                                          | 0.05                 |         |        |              |               |               |                  |                |
| Packaging                      |                                               |                      |         |        |              |               |               |                  |                |
| 110                            |                                               | 0.00                 |         |        |              |               |               |                  |                |
| <b>*110*</b>                   |                                               |                      |         |        |              |               |               |                  |                |
| Small Fab                      | Memo                                          | 0.11                 |         |        |              |               |               |                  |                |
| Small Fab                      | Assemble as per dwg                           |                      |         |        |              |               |               |                  |                |
| 120                            | QC5- Inspect part completeness to step on W/O | 0.00                 |         |        |              |               |               |                  |                |
| <b>*120*</b>                   |                                               |                      |         |        |              |               |               |                  |                |
| QC                             | Memo                                          | 0.01                 |         |        |              |               |               |                  |                |
| Quality Control                |                                               |                      |         |        |              |               |               |                  |                |

DAS  
6  
9-89

FEB 27 2017

2

FF

MAR 15 2017

2

DAS  
38  
9-89

MAR 15 2017

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

|                                                              |  |                                                                                                                                                                                    |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  |                                                                                                                                                  |  |  |
|--------------------------------------------------------------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____ |  | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/> |  | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>             Skid-tube <input type="checkbox"/><br/>             Machining <input type="checkbox"/><br/>             Thermoforming <input type="checkbox"/><br/>             Large Fab <input type="checkbox"/> </div> <div>             Cross tube <input type="checkbox"/><br/>             Small Fab <input type="checkbox"/><br/>             Finishing <input type="checkbox"/><br/>             Composite <input type="checkbox"/> </div> <div>             Water Jet <input type="checkbox"/><br/>             Prod. Eng. Coord. <input type="checkbox"/><br/>             Rec/Store/Packaging <input type="checkbox"/><br/>             Supplier <input type="checkbox"/> </div> <div>             Engineering <input type="checkbox"/><br/>             Quality <input type="checkbox"/><br/>             Other <input type="checkbox"/> </div> </div> |  |  |                                                                                                                                                  |  |  |
| Date : _____                                                 |  | Step #: _____                                                                                                                                                                      |  | QTY Effective : _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |  | <b>MRB (QSI042) Approval</b><br><br><div style="border: 1px solid black; height: 150px; margin-top: 10px;"></div>                                |  |  |
| <b>Description Work Order Deviation</b>                      |  |                                                                                                                                                                                    |  | <b>Disposition</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |                                                                                                                                                  |  |  |
|                                                              |  |                                                                                                                                                                                    |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  |                                                                                                                                                  |  |  |
|                                                              |  |                                                                                                                                                                                    |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  |                                                                                                                                                  |  |  |
|                                                              |  |                                                                                                                                                                                    |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  | <b>Completed By</b><br><br><div style="border: 1px solid black; height: 40px; margin-top: 5px;"></div>                                           |  |  |
|                                                              |  |                                                                                                                                                                                    |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  | <b>Lead hand / Supervisor</b><br><b>Approval Verification</b><br><br><div style="border: 1px solid black; height: 60px; margin-top: 5px;"></div> |  |  |
|                                                              |  |                                                                                                                                                                                    |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  | <b>QC / QA Coordinator</b><br><b>Approval</b><br><br><div style="border: 1px solid black; height: 60px; margin-top: 5px;"></div>                 |  |  |

| Root Cause                                  |                                                |                                                 | FAULT CATEGORY                                             |                                                |                                               |
|---------------------------------------------|------------------------------------------------|-------------------------------------------------|------------------------------------------------------------|------------------------------------------------|-----------------------------------------------|
| Environment <input type="checkbox"/>        | No Re-verification <input type="checkbox"/>    | Pressure/Forced <input type="checkbox"/>        | Temperature/Cure <input type="checkbox"/>                  | Power Loss/Surge <input type="checkbox"/>      | Positioned Wrong <input type="checkbox"/>     |
| Design <input type="checkbox"/>             | Operator <input type="checkbox"/>              | Bending <input type="checkbox"/>                | Set-up <input type="checkbox"/>                            | Folio/Program <input type="checkbox"/>         | Outside Dimensions <input type="checkbox"/>   |
| Doc/Data <input type="checkbox"/>           | Offset/Setup <input type="checkbox"/>          | Centre Not Concentric <input type="checkbox"/>  | BOM/Route <input type="checkbox"/>                         | Grain <input type="checkbox"/>                 | Over/Under tolerance <input type="checkbox"/> |
| Equip/Tooling <input type="checkbox"/>      | Supplier <input type="checkbox"/>              | Cracks <input type="checkbox"/>                 | Broken/Damage/Defect <input type="checkbox"/>              | Weld <input type="checkbox"/>                  | Part Incorrect <input type="checkbox"/>       |
| Handling/Pre <input type="checkbox"/>       | Training <input type="checkbox"/>              | Crimp/Kink/Ripple/Wave <input type="checkbox"/> | Inspection Incomplete/Unqualified <input type="checkbox"/> | Wrong Stock Pulled <input type="checkbox"/>    | Part Lost/Missing <input type="checkbox"/>    |
| Material <input type="checkbox"/>           | Use for Testing <input type="checkbox"/>       | Cuffs <input type="checkbox"/>                  | Contamination <input type="checkbox"/>                     | Out of Sequence <input type="checkbox"/>       | Part Moved <input type="checkbox"/>           |
| Internal Transport <input type="checkbox"/> | Poor Information <input type="checkbox"/>      | Crushing <input type="checkbox"/>               | Countersink <input type="checkbox"/>                       | Off-set <input type="checkbox"/>               | Drawing <input type="checkbox"/>              |
| Tribal Knowledge <input type="checkbox"/>   | Rushing <input type="checkbox"/>               | Heat Treat <input type="checkbox"/>             | Cut Too Short <input type="checkbox"/>                     | Mislabeled <input type="checkbox"/>            | Finish <input type="checkbox"/>               |
| LOA <input type="checkbox"/>                | Product Improvement <input type="checkbox"/>   | Wave/Twist in Tube <input type="checkbox"/>     | Instructions Incomplete/Unclear <input type="checkbox"/>   | Fit/Function <input type="checkbox"/>          | Misread <input type="checkbox"/>              |
| Substation <input type="checkbox"/>         | Process Improvement <input type="checkbox"/>   | Marks/Chatter <input type="checkbox"/>          | Drill Holes <input type="checkbox"/>                       | Misaligned/off center <input type="checkbox"/> | Turning Sequence <input type="checkbox"/>     |
| Past Expiry Date <input type="checkbox"/>   | Manufacturing Process <input type="checkbox"/> | <b>OTHER :</b> _____                            |                                                            |                                                |                                               |
| Misidentified <input type="checkbox"/>      | Past Due <input type="checkbox"/>              |                                                 |                                                            |                                                |                                               |

**\*157085\***

Monday, February 13, 2017 11:45:11 AM

**Approvals:**      **Process Plan:** \_\_\_\_\_ **Date:** \_\_\_\_\_ **Tooling:** \_\_\_\_\_ **Date:** \_\_\_\_\_      **Run**      **Start**      **\*NR1\***  
                          **QC:** \_\_\_\_\_ **Date:** \_\_\_\_\_ **SPC (Y/N):** \_\_\_\_\_ **Date:** \_\_\_\_\_      **Stop**      **\*NR2\***

[illegible]



DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

|                                                              |  |                                                                                                                                                                                    |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  |                                                                                                                                                                                                                                                                                                                                                                                        |  |  |
|--------------------------------------------------------------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____ |  | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/> |  | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>             Skid-tube <input type="checkbox"/><br/>             Machining <input type="checkbox"/><br/>             Thermoforming <input type="checkbox"/><br/>             Large Fab <input type="checkbox"/> </div> <div>             Cross tube <input type="checkbox"/><br/>             Small Fab <input type="checkbox"/><br/>             Finishing <input type="checkbox"/><br/>             Composite <input type="checkbox"/> </div> <div>             Water Jet <input type="checkbox"/><br/>             Prod. Eng. Coord. <input type="checkbox"/><br/>             Rec/Store/Packaging <input type="checkbox"/><br/>             Supplier <input type="checkbox"/> </div> <div>             Engineering <input type="checkbox"/><br/>             Quality <input type="checkbox"/><br/>             Other <input type="checkbox"/> </div> </div> |  |  |                                                                                                                                                                                                                                                                                                                                                                                        |  |  |
| Date :                                                       |  | Step #:                                                                                                                                                                            |  | QTY Effective :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  | <b>MRB (QSI042) Approval</b><br><br><div style="border: 1px solid black; height: 150px; margin-top: 10px;"> <div style="text-align: center; padding-top: 5px;">Completed By</div> <div style="text-align: center; padding-top: 10px;">Lead hand / Supervisor Approval Verification</div> <div style="text-align: center; padding-top: 10px;">QC / QA Coordinator Approval</div> </div> |  |  |
| Description Work Order Deviation                             |  |                                                                                                                                                                                    |  | Disposition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |                                                                                                                                                                                                                                                                                                                                                                                        |  |  |
|                                                              |  |                                                                                                                                                                                    |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  |                                                                                                                                                                                                                                                                                                                                                                                        |  |  |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Root Cause</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>FAULT CATEGORY</b>                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Environment <input type="checkbox"/><br>Design <input type="checkbox"/><br>Doc/Data <input type="checkbox"/><br>Equip/Tooling <input type="checkbox"/><br>Handling/Pre <input type="checkbox"/><br>Material <input type="checkbox"/><br>Internal Transport <input type="checkbox"/><br>Tribal Knowledge <input type="checkbox"/><br>LOA <input type="checkbox"/><br>Substation <input type="checkbox"/><br>Past Expiry Date <input type="checkbox"/><br>Misidentified <input type="checkbox"/> | No Re-verification <input type="checkbox"/><br>Operator <input type="checkbox"/><br>Offset/Setup <input type="checkbox"/><br>Supplier <input type="checkbox"/><br>Training <input type="checkbox"/><br>Use for Testing <input type="checkbox"/><br>Poor Information <input type="checkbox"/><br>Rushing <input type="checkbox"/><br>Product Improvement <input type="checkbox"/><br>Process Improvement <input type="checkbox"/><br>Manufacturing Process <input type="checkbox"/><br>Past Due <input type="checkbox"/> | Pressure/Forced <input type="checkbox"/><br>Bending <input type="checkbox"/><br>Centre Not Concentric <input type="checkbox"/><br>Cracks <input type="checkbox"/><br>Crimp/Kink/Ripple/Wave <input type="checkbox"/><br>Cuffs <input type="checkbox"/><br>Crushing <input type="checkbox"/><br>Heat Treat <input type="checkbox"/><br>Wave/Twist in Tube <input type="checkbox"/><br>Marks/Chatter <input type="checkbox"/> | Temperature/Cure <input type="checkbox"/><br>Set-up <input type="checkbox"/><br>BOM/Route <input type="checkbox"/><br>Broken/Damage/Defect <input type="checkbox"/><br>Inspection Incomplete/Unqualified <input type="checkbox"/><br>Contamination <input type="checkbox"/><br>Countersink <input type="checkbox"/><br>Cut Too Short <input type="checkbox"/><br>Instructions Incomplete/Unclear <input type="checkbox"/><br>Drill Holes <input type="checkbox"/> | Power Loss/Surge <input type="checkbox"/><br>Folio/Program <input type="checkbox"/><br>Grain <input type="checkbox"/><br>Weld <input type="checkbox"/><br>Wrong Stock Pulled <input type="checkbox"/><br>Out of Sequence <input type="checkbox"/><br>Off-set <input type="checkbox"/><br>Misabeled <input type="checkbox"/><br>Fit/Function <input type="checkbox"/><br>Misaligned/off center <input type="checkbox"/> | Positioned Wrong <input type="checkbox"/><br>Outside Dimensions <input type="checkbox"/><br>Over/Under tolerance <input type="checkbox"/><br>Part Incorrect <input type="checkbox"/><br>Part Lost/Missing <input type="checkbox"/><br>Part Moved <input type="checkbox"/><br>Drawing <input type="checkbox"/><br>Finish <input type="checkbox"/><br>Misread <input type="checkbox"/><br>Turning Sequence <input type="checkbox"/> |
| OTHER : <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                   |

**Work Order ID 157085****\*157085\***

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Monday, February 13, 2017 11:45:11 AM

Item ID: D4038-041 Accept **\*N900040100\*** Setup Start **\*NS1\***  
Revision ID: Stop **\*NS2\***  
Item Name: Angle Assembly Fwd LH  
Start Date: 2/21/2017 Start Qty: 2.00 **\*2\*** Cust Item ID:  
Required Date: 2/23/2017 Req'd Qty: 2.00 **\*2\*** Customer:  
Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

| Sequence ID/<br>Work Center ID | Operation<br>Description                    | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|---------------------------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| 140                            | QC21- Final Inspection - Work Order Release | 0.00                 |         |        |              |               |               |                  |                |
| <b>*140*</b>                   |                                             |                      |         |        |              |               |               |                  |                |
| QC                             | Memo                                        | 0.03                 |         |        |              |               |               |                  |                |
| Quality Control                |                                             |                      |         |        |              |               |               |                  |                |

17/3/23 MF 17-3-23



DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

## WORK ORDER NON-CONFORMANCE / UPDATE

Work Order update only ☐

| Work Order: _____<br>Part No. _____<br>NCR No. _____ |  | DISPOSITION          |  | AGAINST DEPARTMENT/PROCESS |  |        |  |               |  |            |  |                     |  |             |  |
|------------------------------------------------------|--|----------------------|--|----------------------------|--|--------|--|---------------|--|------------|--|---------------------|--|-------------|--|
| Date: _____                                          |  | Step #: _____        |  | Suspected Unapproved       |  | Rework |  | Skid-tube     |  | Cross tube |  | Water Jet           |  | Engineering |  |
|                                                      |  |                      |  | Use-as-is                  |  | Scrap  |  | Machining     |  | Small Fab  |  | Prod. Eng. Coord.   |  | Quality     |  |
|                                                      |  |                      |  | Unapproved                 |  |        |  | Thermoforming |  | Finishing  |  | Rec/Store/Packaging |  | Other       |  |
| Date: _____                                          |  | QTY Effective: _____ |  |                            |  |        |  | Large Fab     |  | Composite  |  | Supplier            |  |             |  |
| Description Work Order Deviation                     |  |                      |  |                            |  |        |  |               |  |            |  |                     |  |             |  |
| Disposition                                          |  |                      |  |                            |  |        |  |               |  |            |  |                     |  |             |  |
| Completed By                                         |  |                      |  |                            |  |        |  |               |  |            |  |                     |  |             |  |
| Lead hand / Supervisor Approval Verification         |  |                      |  |                            |  |        |  |               |  |            |  |                     |  |             |  |
| QC / QA Coordinator Approval                         |  |                      |  |                            |  |        |  |               |  |            |  |                     |  |             |  |
| MRB (QS1042) Approval                                |  |                      |  |                            |  |        |  |               |  |            |  |                     |  |             |  |

| FAULT CATEGORY     |  |  |  |                        |  |  |  |                                   |  |  |  |                       |  |  |  |                      |  |  |  |
|--------------------|--|--|--|------------------------|--|--|--|-----------------------------------|--|--|--|-----------------------|--|--|--|----------------------|--|--|--|
| Root Cause         |  |  |  | Pressure/Forced        |  |  |  | Temperature/Cure                  |  |  |  | Power Loss/Surge      |  |  |  | Positioned Wrong     |  |  |  |
| Environment        |  |  |  | Bending                |  |  |  | Set-up                            |  |  |  | Folio/Program         |  |  |  | Outside Dimensions   |  |  |  |
| Design             |  |  |  | Centre Not Concentric  |  |  |  | BOM/Route                         |  |  |  | Grain                 |  |  |  | Over/Under tolerance |  |  |  |
| Doc/Data           |  |  |  | Cracks                 |  |  |  | Broken/Damage/Defect              |  |  |  | Weld                  |  |  |  | Part Incorrect       |  |  |  |
| Equip/Tooling      |  |  |  | Crimp/Kink/Ripple/Wave |  |  |  | Inspection Incomplete/Unqualified |  |  |  | Wrong Stock Pulled    |  |  |  | Part Lost/Missing    |  |  |  |
| Handling/Pre       |  |  |  | Cuffs                  |  |  |  | Contamination                     |  |  |  | Out of Sequence       |  |  |  | Part Moved           |  |  |  |
| Material           |  |  |  | Crushing               |  |  |  | Countersink                       |  |  |  | Off-set               |  |  |  | Drawing              |  |  |  |
| Internal Transport |  |  |  | Heat Treat             |  |  |  | Cut Too Short                     |  |  |  | Mislabeled            |  |  |  | Finish               |  |  |  |
| Tribal Knowledge   |  |  |  | Wave/Twist in Tube     |  |  |  | Instructions Incomplete/Unclear   |  |  |  | Fit/Function          |  |  |  | Misread              |  |  |  |
| LOA                |  |  |  | Marks/Chatter          |  |  |  | Drill Holes                       |  |  |  | Misaligned/off center |  |  |  | Turning Sequence     |  |  |  |
| Substation         |  |  |  |                        |  |  |  |                                   |  |  |  |                       |  |  |  |                      |  |  |  |
| Past Expiry Date   |  |  |  |                        |  |  |  |                                   |  |  |  |                       |  |  |  |                      |  |  |  |
| Misidentified      |  |  |  |                        |  |  |  |                                   |  |  |  |                       |  |  |  |                      |  |  |  |
|                    |  |  |  | OTHER: _____           |  |  |  |                                   |  |  |  |                       |  |  |  |                      |  |  |  |



# Picklist Print

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Page 1  
*[Signature]*

Work Order ID: 157085

**\*157085\***

Parent Item: D4038-041

**\*D4038-041\***

Parent Item Name: Angle Assembly Fwd LH

Start Date: 2/21/2017

Required Date: 2/23/2017

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP REV:A NEW ISSUE 10-04-21 JLM VERIFIED BY:EC IPP  
Rev:B 11.01.31 as per dwg rev.c DD verified by:ec

| Component Item ID/<br>Item Name               | Replacement<br>Item ID | Mfg/<br>Purch | Bin<br>Item | Primary<br>Location | Last<br>Location | Route<br>Seq ID | Unit of<br>Measure | Qty on<br>Hand | Qty per Kit | Total<br>Qty    | Qty<br>Issued | Date<br>Issued | Status     |
|-----------------------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|-----------------|---------------|----------------|------------|
| D4038-1<br><b>*D4038-1*</b><br>Angle, Fwd, LH |                        | Manufactured  | No          |                     |                  | 100             | Each               | 0.0000         | 1           | 2               |               |                | DAS 6 9-89 |
|                                               |                        |               |             |                     |                  |                 |                    |                | **          | 157085          |               | FEB 27 2017    |            |
| D4038-5<br><b>*D4038-5*</b><br>Block          |                        | Manufactured  | No          |                     |                  | 100             | Each               | 2.0000         | 1           | 2               |               |                | DAS 6 9-89 |
|                                               |                        |               |             |                     |                  |                 |                    |                | **          | 157103          |               | FEB 27 2017    |            |
|                                               |                        |               |             | <u>Location</u>     |                  |                 |                    | <u>Loc Qty</u> |             | <u>Loc Code</u> |               |                |            |
|                                               |                        |               |             | ST072               |                  |                 |                    | 2              |             |                 |               |                |            |
|                                               |                        |               |             | 152706              |                  |                 |                    | 2              |             |                 |               |                |            |
| D4038-9<br><b>*D4038-9*</b><br>Block          |                        | Manufactured  | No          |                     |                  | 100             | Each               | 2.0000         | 1           | 2               |               |                | DAS 6 9-89 |
|                                               |                        |               |             |                     |                  |                 |                    |                | **          | 157101X1        |               | FEB 27 2017    |            |
|                                               |                        |               |             | <u>Location</u>     |                  |                 |                    | <u>Loc Qty</u> |             | <u>Loc Code</u> |               |                |            |
|                                               |                        |               |             | st073               |                  |                 |                    | 2              |             |                 |               |                |            |
|                                               |                        |               |             | 148059              |                  |                 |                    | 2              |             |                 |               |                |            |
| AN3-14A<br><b>*AN3-14A*</b><br>Bolt           |                        | Purchased     | No          |                     |                  | 100             | Each               | 72.0000        | 2           | 4               |               |                | DAS 6 9-89 |
|                                               |                        |               |             |                     |                  |                 |                    |                | **          |                 |               | FEB 27 2017    |            |
|                                               |                        |               |             | <u>Location</u>     |                  |                 |                    | <u>Loc Qty</u> |             | <u>Loc Code</u> |               |                |            |
|                                               |                        |               |             | over003             |                  |                 |                    | 30             |             |                 |               |                |            |
|                                               |                        |               |             | m134852             |                  |                 |                    | 0              |             |                 |               |                |            |
|                                               |                        |               |             | m136406             |                  |                 |                    | 30             |             |                 |               |                |            |
|                                               |                        |               |             | ST349               |                  |                 |                    | 42             |             |                 |               |                |            |
|                                               |                        |               |             | m135966             |                  |                 |                    | 42             |             |                 |               |                |            |

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  |                       |                                              |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|-----------------------|----------------------------------------------|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>             Skid-tube <input type="checkbox"/><br/>             Machining <input type="checkbox"/><br/>             Thermoforming <input type="checkbox"/><br/>             Large Fab <input type="checkbox"/> </div> <div>             Cross tube <input type="checkbox"/><br/>             Small Fab <input type="checkbox"/><br/>             Finishing <input type="checkbox"/><br/>             Composite <input type="checkbox"/> </div> <div>             Water Jet <input type="checkbox"/><br/>             Prod. Eng. Coord. <input type="checkbox"/><br/>             Rec/Store/Packaging <input type="checkbox"/><br/>             Supplier <input type="checkbox"/> </div> <div>             Engineering <input type="checkbox"/><br/>             Quality <input type="checkbox"/><br/>             Other <input type="checkbox"/> </div> </div> |  |  |                       |                                              |  |
| Date :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  | Step #:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  | QTY Effective :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  | MRB (QSI042) Approval |                                              |  |
| Description Work Order Deviation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  | Disposition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |                       | Completed By                                 |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  |                       | Lead hand / Supervisor Approval Verification |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  |                       | QC / QA Coordinator Approval                 |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  |                       |                                              |  |
| <b>Root Cause</b><br><div style="display: flex;"> <div style="flex: 1;">             Environment <input type="checkbox"/><br/>             Design <input type="checkbox"/><br/>             Doc/Data <input type="checkbox"/><br/>             Equip/Tooling <input type="checkbox"/><br/>             Handling/Pre <input type="checkbox"/><br/>             Material <input type="checkbox"/><br/>             Internal Transport <input type="checkbox"/><br/>             Tribal Knowledge <input type="checkbox"/><br/>             LOA <input type="checkbox"/><br/>             Substation <input type="checkbox"/><br/>             Past Expiry Date <input type="checkbox"/><br/>             Misidentified <input type="checkbox"/> </div> <div style="flex: 1;">             No Re-verification <input type="checkbox"/><br/>             Operator <input type="checkbox"/><br/>             Offset/Setup <input type="checkbox"/><br/>             Supplier <input type="checkbox"/><br/>             Training <input type="checkbox"/><br/>             Use for Testing <input type="checkbox"/><br/>             Poor Information <input type="checkbox"/><br/>             Rushing <input type="checkbox"/><br/>             Product Improvement <input type="checkbox"/><br/>             Process Improvement <input type="checkbox"/><br/>             Manufacturing Process <input type="checkbox"/><br/>             Past Due <input type="checkbox"/> </div> </div> |  | <div style="display: flex;"> <div style="flex: 1;">             Pressure/Forced <input type="checkbox"/><br/>             Bending <input type="checkbox"/><br/>             Centre Not Concentric <input type="checkbox"/><br/>             Cracks <input type="checkbox"/><br/>             Crimp/Kink/Ripple/Wave <input type="checkbox"/><br/>             Cuffs <input type="checkbox"/><br/>             Crushing <input type="checkbox"/><br/>             Heat Treat <input type="checkbox"/><br/>             Wave/Twist in Tube <input type="checkbox"/><br/>             Marks/Chatter <input type="checkbox"/> </div> <div style="flex: 1;"> <b>FAULT CATEGORY</b><br/>             Temperature/Cure <input type="checkbox"/><br/>             Set-up <input type="checkbox"/><br/>             BOM/Route <input type="checkbox"/><br/>             Broken/Damage/Defect <input type="checkbox"/><br/>             Inspection Incomplete/Unqualified <input type="checkbox"/><br/>             Contamination <input type="checkbox"/><br/>             Countersink <input type="checkbox"/><br/>             Cut Too Short <input type="checkbox"/><br/>             Instructions Incomplete/Unclear <input type="checkbox"/><br/>             Drill Holes <input type="checkbox"/> </div> <div style="flex: 1;">             Power Loss/Surge <input type="checkbox"/><br/>             Folio/Program <input type="checkbox"/><br/>             Grain <input type="checkbox"/><br/>             Weld <input type="checkbox"/><br/>             Wrong Stock Pulled <input type="checkbox"/><br/>             Out of Sequence <input type="checkbox"/><br/>             Off-set <input type="checkbox"/><br/>             Misabeled <input type="checkbox"/><br/>             Fit/Function <input type="checkbox"/><br/>             Misaligned/off center <input type="checkbox"/> </div> <div style="flex: 1;">             Positioned Wrong <input type="checkbox"/><br/>             Outside Dimensions <input type="checkbox"/><br/>             Over/Under tolerance <input type="checkbox"/><br/>             Part Incorrect <input type="checkbox"/><br/>             Part Lost/Missing <input type="checkbox"/><br/>             Part Moved <input type="checkbox"/><br/>             Drawing <input type="checkbox"/><br/>             Finish <input type="checkbox"/><br/>             Misread <input type="checkbox"/><br/>             Turning Sequence <input type="checkbox"/> </div> </div> |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  |                       |                                              |  |
| OTHER : <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  |                       |                                              |  |



# Picklist Print

Page 2

Monday, February 13, 2017 11:45:15 AM

Work Order ID: 157085

**\*157085\***

Parent Item: D4038-041

**\*D4038-041\***

Parent Item Name: Angle Assembly Fwd LH

Start Date: 2/21/2017

Required Date: 2/23/2017

Start Qty: 2.00

Required Qty: 2.00

MS21042L3

Purchased

No

100

Each

1,440.000

2

4

**\*MS21042L3\***

**\*\***

Nut

Location

Loc Qty

Loc Code

FP001

100

m135945

100

GA

150

m134360

108

m135135

42

OVER007

500

M136665

500

ST303

690

M136406

190

M136554

500

136948

NAS1149D0363J

Purchased

No

100

Each

1,390.000

4

8

**\*NAS1149D0363J\***

**\*\***

Washer

Location

Loc Qty

Loc Code

GA

233

m134055

233

ST263

1157

m136318

157

m136781

1000

8

DAS  
9-89

FEB 27 2017

Monday, February 13, 2017 11:45:15 AM

Shop Packet Print

Page 2

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



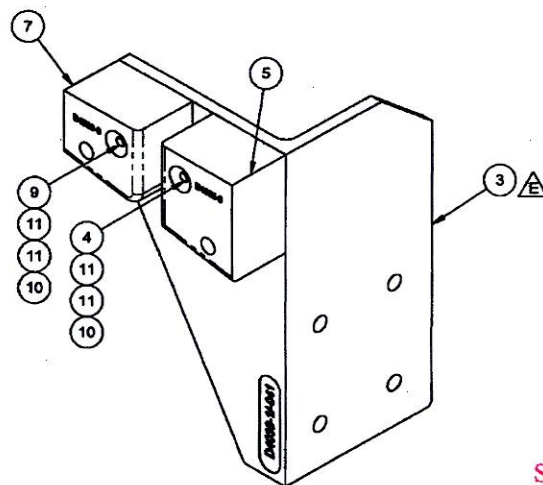
## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

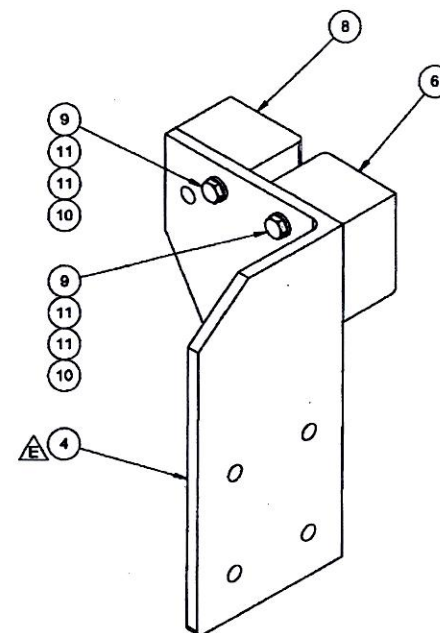
Work Order update only ☐

|                                                              |                                             |                                                                                                                                                                                    |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                           |                                 |                                   |                                              |                                 |                                        |                                             |                                   |                                       |                                                |                                    |                                |                                               |                                        |                                   |                                 |                                               |                               |                                         |                                       |                                   |                                                 |                                                            |                                             |                                            |                                   |                                          |                                |                                        |                                          |                                     |                                             |                                           |                                   |                                      |                                  |                                  |                                           |                                  |                                     |                                        |                                     |                                 |                              |                                              |                                             |                                                          |                                       |                                  |                                     |                                              |                                        |                                      |                                                |                                           |                                           |                                                |               |  |  |  |
|--------------------------------------------------------------|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|---------------------------------|-----------------------------------|----------------------------------------------|---------------------------------|----------------------------------------|---------------------------------------------|-----------------------------------|---------------------------------------|------------------------------------------------|------------------------------------|--------------------------------|-----------------------------------------------|----------------------------------------|-----------------------------------|---------------------------------|-----------------------------------------------|-------------------------------|-----------------------------------------|---------------------------------------|-----------------------------------|-------------------------------------------------|------------------------------------------------------------|---------------------------------------------|--------------------------------------------|-----------------------------------|------------------------------------------|--------------------------------|----------------------------------------|------------------------------------------|-------------------------------------|---------------------------------------------|-------------------------------------------|-----------------------------------|--------------------------------------|----------------------------------|----------------------------------|-------------------------------------------|----------------------------------|-------------------------------------|----------------------------------------|-------------------------------------|---------------------------------|------------------------------|----------------------------------------------|---------------------------------------------|----------------------------------------------------------|---------------------------------------|----------------------------------|-------------------------------------|----------------------------------------------|----------------------------------------|--------------------------------------|------------------------------------------------|-------------------------------------------|-------------------------------------------|------------------------------------------------|---------------|--|--|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____ |                                             | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/> |                                           | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>             Skid-tube <input type="checkbox"/><br/>             Machining <input type="checkbox"/><br/>             Thermoforming <input type="checkbox"/><br/>             Large Fab <input type="checkbox"/> </div> <div>             Cross tube <input type="checkbox"/><br/>             Small Fab <input type="checkbox"/><br/>             Finishing <input type="checkbox"/><br/>             Composite <input type="checkbox"/> </div> <div>             Water Jet <input type="checkbox"/><br/>             Prod. Eng. Coord. <input type="checkbox"/><br/>             Rec/Store/Packaging <input type="checkbox"/><br/>             Supplier <input type="checkbox"/> </div> <div>             Engineering <input type="checkbox"/><br/>             Quality <input type="checkbox"/><br/>             Other <input type="checkbox"/> </div> </div> |                                           |                                 |                                   |                                              |                                 |                                        |                                             |                                   |                                       |                                                |                                    |                                |                                               |                                        |                                   |                                 |                                               |                               |                                         |                                       |                                   |                                                 |                                                            |                                             |                                            |                                   |                                          |                                |                                        |                                          |                                     |                                             |                                           |                                   |                                      |                                  |                                  |                                           |                                  |                                     |                                        |                                     |                                 |                              |                                              |                                             |                                                          |                                       |                                  |                                     |                                              |                                        |                                      |                                                |                                           |                                           |                                                |               |  |  |  |
| Date :                                                       |                                             | Step #:                                                                                                                                                                            |                                           | QTY Effective :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                           |                                 | MRB (QSI042) Approval             |                                              |                                 |                                        |                                             |                                   |                                       |                                                |                                    |                                |                                               |                                        |                                   |                                 |                                               |                               |                                         |                                       |                                   |                                                 |                                                            |                                             |                                            |                                   |                                          |                                |                                        |                                          |                                     |                                             |                                           |                                   |                                      |                                  |                                  |                                           |                                  |                                     |                                        |                                     |                                 |                              |                                              |                                             |                                                          |                                       |                                  |                                     |                                              |                                        |                                      |                                                |                                           |                                           |                                                |               |  |  |  |
| Description Work Order Deviation                             |                                             |                                                                                                                                                                                    |                                           | Disposition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                           |                                 |                                   | Completed By                                 |                                 |                                        |                                             |                                   |                                       |                                                |                                    |                                |                                               |                                        |                                   |                                 |                                               |                               |                                         |                                       |                                   |                                                 |                                                            |                                             |                                            |                                   |                                          |                                |                                        |                                          |                                     |                                             |                                           |                                   |                                      |                                  |                                  |                                           |                                  |                                     |                                        |                                     |                                 |                              |                                              |                                             |                                                          |                                       |                                  |                                     |                                              |                                        |                                      |                                                |                                           |                                           |                                                |               |  |  |  |
|                                                              |                                             |                                                                                                                                                                                    |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                           |                                 |                                   | Lead hand / Supervisor Approval Verification |                                 |                                        |                                             |                                   |                                       |                                                |                                    |                                |                                               |                                        |                                   |                                 |                                               |                               |                                         |                                       |                                   |                                                 |                                                            |                                             |                                            |                                   |                                          |                                |                                        |                                          |                                     |                                             |                                           |                                   |                                      |                                  |                                  |                                           |                                  |                                     |                                        |                                     |                                 |                              |                                              |                                             |                                                          |                                       |                                  |                                     |                                              |                                        |                                      |                                                |                                           |                                           |                                                |               |  |  |  |
|                                                              |                                             |                                                                                                                                                                                    |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                           |                                 |                                   | QC / QA Coordinator Approval                 |                                 |                                        |                                             |                                   |                                       |                                                |                                    |                                |                                               |                                        |                                   |                                 |                                               |                               |                                         |                                       |                                   |                                                 |                                                            |                                             |                                            |                                   |                                          |                                |                                        |                                          |                                     |                                             |                                           |                                   |                                      |                                  |                                  |                                           |                                  |                                     |                                        |                                     |                                 |                              |                                              |                                             |                                                          |                                       |                                  |                                     |                                              |                                        |                                      |                                                |                                           |                                           |                                                |               |  |  |  |
|                                                              |                                             |                                                                                                                                                                                    |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                           |                                 |                                   |                                              |                                 |                                        |                                             |                                   |                                       |                                                |                                    |                                |                                               |                                        |                                   |                                 |                                               |                               |                                         |                                       |                                   |                                                 |                                                            |                                             |                                            |                                   |                                          |                                |                                        |                                          |                                     |                                             |                                           |                                   |                                      |                                  |                                  |                                           |                                  |                                     |                                        |                                     |                                 |                              |                                              |                                             |                                                          |                                       |                                  |                                     |                                              |                                        |                                      |                                                |                                           |                                           |                                                |               |  |  |  |
| Root Cause                                                   |                                             | FAULT CATEGORY                                                                                                                                                                     |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                           |                                 |                                   |                                              |                                 |                                        |                                             |                                   |                                       |                                                |                                    |                                |                                               |                                        |                                   |                                 |                                               |                               |                                         |                                       |                                   |                                                 |                                                            |                                             |                                            |                                   |                                          |                                |                                        |                                          |                                     |                                             |                                           |                                   |                                      |                                  |                                  |                                           |                                  |                                     |                                        |                                     |                                 |                              |                                              |                                             |                                                          |                                       |                                  |                                     |                                              |                                        |                                      |                                                |                                           |                                           |                                                |               |  |  |  |
| Environment <input type="checkbox"/>                         | No Re-verification <input type="checkbox"/> | Pressure/Forced <input type="checkbox"/>                                                                                                                                           | Temperature/Cure <input type="checkbox"/> | Power Loss/Surge <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Positioned Wrong <input type="checkbox"/> | Design <input type="checkbox"/> | Operator <input type="checkbox"/> | Bending <input type="checkbox"/>             | Set-up <input type="checkbox"/> | Folio/Program <input type="checkbox"/> | Outside Dimensions <input type="checkbox"/> | Doc/Data <input type="checkbox"/> | Offset/Setup <input type="checkbox"/> | Centre Not Concentric <input type="checkbox"/> | BOM/Route <input type="checkbox"/> | Grain <input type="checkbox"/> | Over/Under tolerance <input type="checkbox"/> | Equip/Tooling <input type="checkbox"/> | Supplier <input type="checkbox"/> | Cracks <input type="checkbox"/> | Broken/Damage/Defect <input type="checkbox"/> | Weld <input type="checkbox"/> | Part Incorrect <input type="checkbox"/> | Handling/Pre <input type="checkbox"/> | Training <input type="checkbox"/> | Crimp/Kink/Ripple/Wave <input type="checkbox"/> | Inspection Incomplete/Unqualified <input type="checkbox"/> | Wrong Stock Pulled <input type="checkbox"/> | Part Lost/Missing <input type="checkbox"/> | Material <input type="checkbox"/> | Use for Testing <input type="checkbox"/> | Cuffs <input type="checkbox"/> | Contamination <input type="checkbox"/> | Out of Sequence <input type="checkbox"/> | Part Moved <input type="checkbox"/> | Internal Transport <input type="checkbox"/> | Poor Information <input type="checkbox"/> | Crushing <input type="checkbox"/> | Countersink <input type="checkbox"/> | Off-set <input type="checkbox"/> | Drawing <input type="checkbox"/> | Tribal Knowledge <input type="checkbox"/> | Rushing <input type="checkbox"/> | Heat Treat <input type="checkbox"/> | Cut Too Short <input type="checkbox"/> | Mislabeled <input type="checkbox"/> | Finish <input type="checkbox"/> | LOA <input type="checkbox"/> | Product Improvement <input type="checkbox"/> | Wave/Twist in Tube <input type="checkbox"/> | Instructions Incomplete/Unclear <input type="checkbox"/> | Fit/Function <input type="checkbox"/> | Misread <input type="checkbox"/> | Substation <input type="checkbox"/> | Process Improvement <input type="checkbox"/> | Marks/Chatter <input type="checkbox"/> | Drill Holes <input type="checkbox"/> | Misaligned/off center <input type="checkbox"/> | Turning Sequence <input type="checkbox"/> | Past Expiry Date <input type="checkbox"/> | Manufacturing Process <input type="checkbox"/> | OTHER : _____ |  |  |  |
| Misidentified <input type="checkbox"/>                       | Past Due <input type="checkbox"/>           |                                                                                                                                                                                    |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                           |                                 |                                   |                                              |                                 |                                        |                                             |                                   |                                       |                                                |                                    |                                |                                               |                                        |                                   |                                 |                                               |                               |                                         |                                       |                                   |                                                 |                                                            |                                             |                                            |                                   |                                          |                                |                                        |                                          |                                     |                                             |                                           |                                   |                                      |                                  |                                  |                                           |                                  |                                     |                                        |                                     |                                 |                              |                                              |                                             |                                                          |                                       |                                  |                                     |                                              |                                        |                                      |                                                |                                           |                                           |                                                |               |  |  |  |

| ITEM NO. | QTY. -041 | QTY. -042 | PART NUMBER   | DESCRIPTION             |
|----------|-----------|-----------|---------------|-------------------------|
| 1        | X         |           | D4038-041     | ANGLE ASSEMBLY, FWD, LH |
| 2        |           | X         | D4038-042     | ANGLE ASSEMBLY, FWD, RH |
| 3        | 1         |           | D4038-1       | ANGLE, FWD, LH          |
| 4        |           | 1         | D4038-2       | ANGLE, FWD, RH          |
| 5        | 1         |           | D4038-5       | BLOCK                   |
| 6        |           | 1         | D4038-6       | BLOCK                   |
| 7        | 1         |           | D4038-9       | BLOCK                   |
| 8        |           | 1         | D4038-10      | BLOCK                   |
| 9        | 2         | 2         | AN3-14A       | BOLT                    |
| 10       | 2         | 2         | MS21042L3     | NUT                     |
| 11       | 4         | 4         | NAS1149D0363J | WASHER (AN960JD10)      |



**D4038-041 ANGLE ASSEMBLY, FWD, LH**



**D4038-042 ANGLE ASSEMBLY, FWD, RH**

**RELEASED**  
2011-04-31  
JMB

- NOTES:**  
1) MATERIAL: N/A  
2) FINISH: POWDER COAT "WHITE" (4.3.5.1) PER DART QSI 005 4.3  
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED  
4) UNITS: INCHES UNLESS OTHERWISE NOTED  
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX  
6) IDENTIFICATION: N/A  
7) WEIGHT: -041 - 1.75 lbs  
              -042 - 1.74 lbs

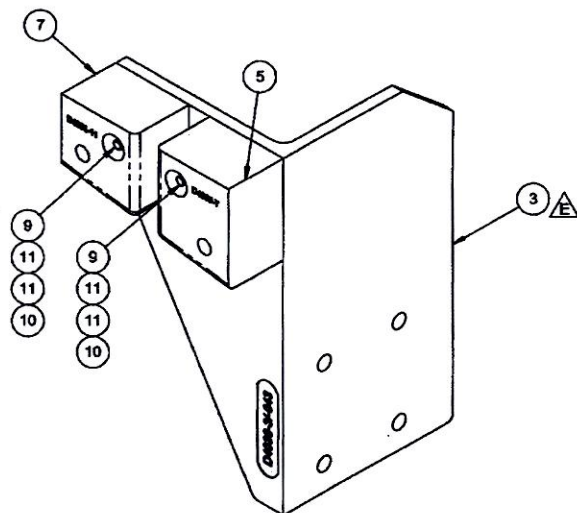
SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 157085

FEB 13 2017

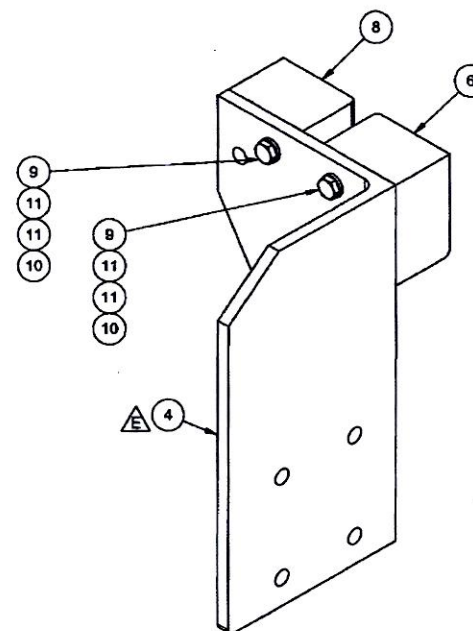
|                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                |    |          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----------|
| E                                                                                                                                                                                                                                                                                                                                                                                                                               | 1.19 X 1.00 CHAMFER WAS R1.00. REF: NCR11-543.                                                                                                                                                                                                 | MB | 11.04.11 |
| D                                                                                                                                                                                                                                                                                                                                                                                                                               | REVISED D4038-77-84-11-12 AS FOLLOWS: 1.87 WAS 1.73 (C7-9); 2.14 WAS 2.00 (C4-9); 2.13 WAS 2.00 (C7-10); 1.86 WAS 1.73 (C4-10); 1.82 WAS 1.38 (C7-13); 1.79 WAS 1.65 (C4-13); 1.77 WAS 1.65 (C7-14); 1.49 WAS 1.38 (C4-14). REASON: NCR11-458. | MB | 11.03.03 |
| C                                                                                                                                                                                                                                                                                                                                                                                                                               | REVISED D4038-3/-4 AS FOLLOWS: 0.589 WAS 0.714 (B2-5, B4-6); D4038-043/-044 ARE AFFECTED. REASON: NCR11-399.                                                                                                                                   | MB | 11.01.20 |
| B                                                                                                                                                                                                                                                                                                                                                                                                                               | REVISED DIMENSIONS ALL SHEETS, ADD Ø0.318 HOLES IN -11-21-3/-4 PARTS, ADD RADIUS TO -11-21-3/-4 PARTS                                                                                                                                          | HS | 10.01.05 |
| A                                                                                                                                                                                                                                                                                                                                                                                                                               | NEW ISSUE                                                                                                                                                                                                                                      | HS | 09.12.14 |
| REV.                                                                                                                                                                                                                                                                                                                                                                                                                            | DESCRIPTION                                                                                                                                                                                                                                    | BY | DATE     |
| DESIGN                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                |    |          |
| DRAWN                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                |    |          |
| CHECKED                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                |    |          |
| MFG. APPR.                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                |    |          |
| APPROVED                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                |    |          |
| DE APPR.                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                |    |          |
| DATE                                                                                                                                                                                                                                                                                                                                                                                                                            | 11.04.11                                                                                                                                                                                                                                       |    |          |
| <b>DART AEROSPACE LTD</b><br>HAWKESBURY, ONTARIO, CANADA<br>DRAWING NO. <b>D4038</b><br>TITLE <b>BRACKET</b><br>REV. E<br>SHEET 1 OF 14<br>SCALE<br>NTS<br>COPYRIGHT © 2006 BY DART AEROSPACE LTD<br>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS UNDERSTANDING THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED IN ANY MANNER WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD. |                                                                                                                                                                                                                                                |    |          |



| ITEM NO. | QTY. -043 | QTY. -044 | PART NUMBER   | DESCRIPTION             |
|----------|-----------|-----------|---------------|-------------------------|
| 1        | X         |           | D4038-043     | ANGLE ASSEMBLY, AFT, LH |
| 2        |           | X         | D4038-044     | ANGLE ASSEMBLY, AFT, RH |
| 3        | 1         |           | D4038-3       | ANGLE, AFT, LH          |
| 4        |           | 1         | D4038-4       | ANGLE, AFT, RH          |
| 5        | 1         |           | D4038-7       | BLOCK                   |
| 6        |           | 1         | D4038-8       | BLOCK                   |
| 7        | 1         |           | D4038-11      | BLOCK                   |
| 8        |           | 1         | D4038-12      | BLOCK                   |
| 9        | 2         | 2         | AN3-14A       | BOLT                    |
| 10       | 2         | 2         | MS21042L3     | NUT                     |
| 11       | 4         | 4         | NAS1149D0363J | WASHER (AN960JD10)      |



**D4038-043 ANGLE ASSEMBLY, AFT, LH**

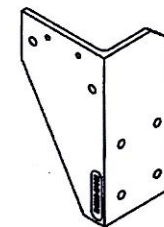
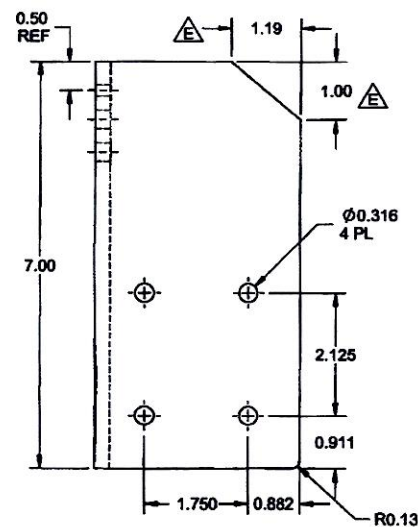
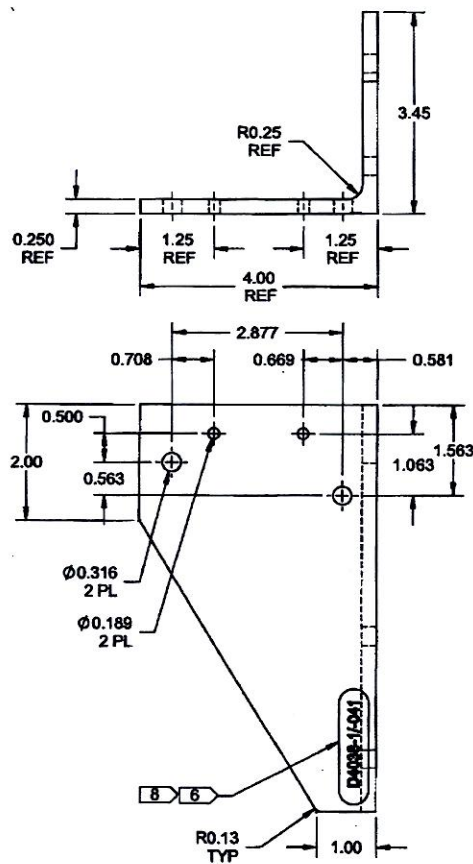


**D4038-044 ANGLE ASSEMBLY, AFT, RH**

**NOTES:**  
 1) MATERIAL: N/A  
 2) FINISH: POWDER COAT "WHITE" (4.3.5.1) PER DART QSI 005 4.3  
 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED  
 4) UNITS: INCHES UNLESS OTHERWISE NOTED  
 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX  
 6) IDENTIFICATION: N/A  
 7) WEIGHT: -043 - 1.96 lbs  
 -044 - 1.74 lbs

**RELEASED**  
 2011-04-21  
*JP*

|            |          |                                                                                                                                                                                                                                                                                               |               |
|------------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| DESIGN     |          | <b>DART AEROSPACE LTD</b>                                                                                                                                                                                                                                                                     |               |
| DRAWN      |          | HAWKESBURY, ONTARIO, CANADA                                                                                                                                                                                                                                                                   |               |
| CHECKED    |          | DRAWING NO. <b>D4038</b>                                                                                                                                                                                                                                                                      | REV. E        |
| MFG. APPR. |          |                                                                                                                                                                                                                                                                                               | SHEET 2 OF 14 |
| APPROVED   |          | TITLE <b>BRACKET</b>                                                                                                                                                                                                                                                                          | SCALE NTS     |
| DE APPR.   |          |                                                                                                                                                                                                                                                                                               |               |
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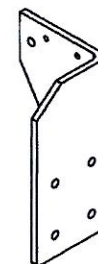
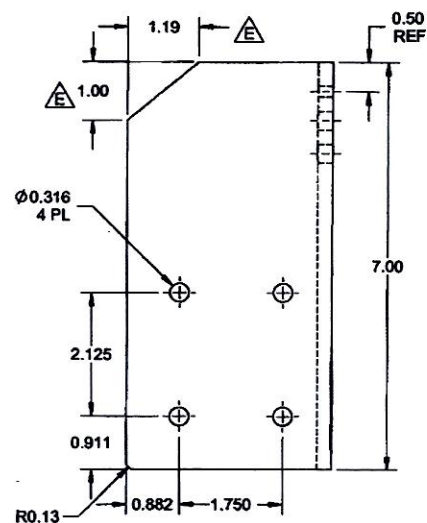
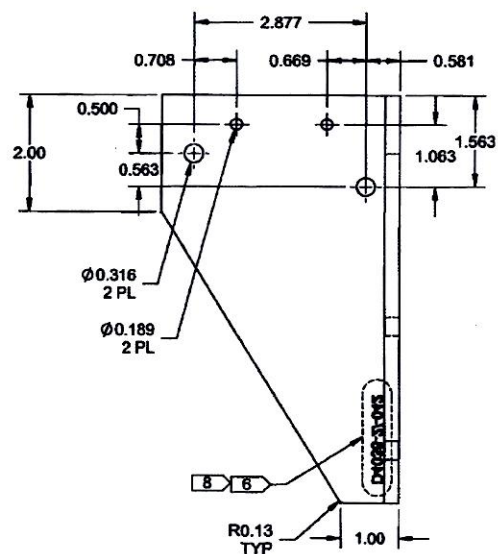
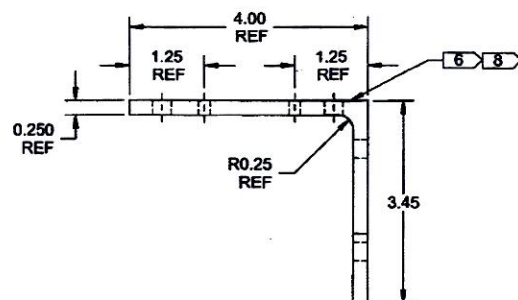
**D4038-1 ANGLE, FWD, LH**

**RELEASED**  
2011-04-21

**NOTES:**

- 1) MATERIAL: 6061-T6/T6510/T6511 ALUMINUM ANGLE, 4.000 X 4.000 X 0.250  
PER AMS-QQ-A-200/8  
REF DART SPEC M6061T6A4.000XW250
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: ENGRAVE P/N IN THIS AREA AS SHOWN (NEAR SIDE ONLY) TO MAX  
DEPTH OF 0.010 IN 0.18 HIGH LETTERS WITH MIN RADIUS TOOL OF 0.015
- 7) WEIGHT: 1.03 lbs
- 8) SPOT FACE MAX DEPTH OF 0.010 PRIOR TO MARKING

|            |          |                                                                                                                                                                                                                                                                                                  |               |
|------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| DESIGN     |          | <b>DART AEROSPACE LTD</b>                                                                                                                                                                                                                                                                        |               |
| DRAWN      |          | HAWKESBURY, ONTARIO, CANADA                                                                                                                                                                                                                                                                      |               |
| CHECKED    |          | DRAWING NO.                                                                                                                                                                                                                                                                                      | REV. E        |
| MFG. APPR. |          | <b>D4038</b>                                                                                                                                                                                                                                                                                     | SHEET 3 OF 14 |
| APPROVED   |          | TITLE                                                                                                                                                                                                                                                                                            | SCALE         |
| DE APPR.   |          | <b>BRACKET</b>                                                                                                                                                                                                                                                                                   | NTS           |
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# **D4038-2 ANGLE, FWD. RH**

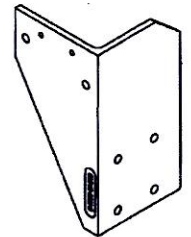
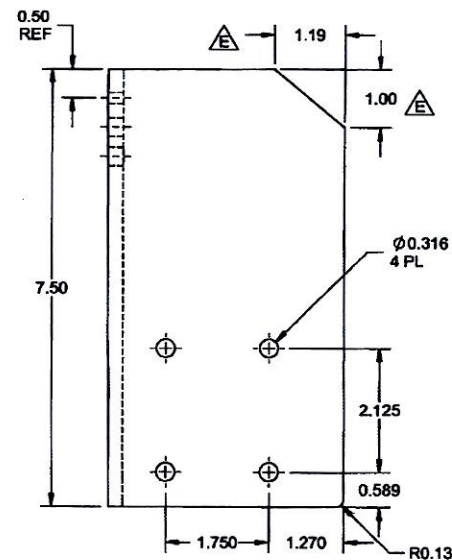
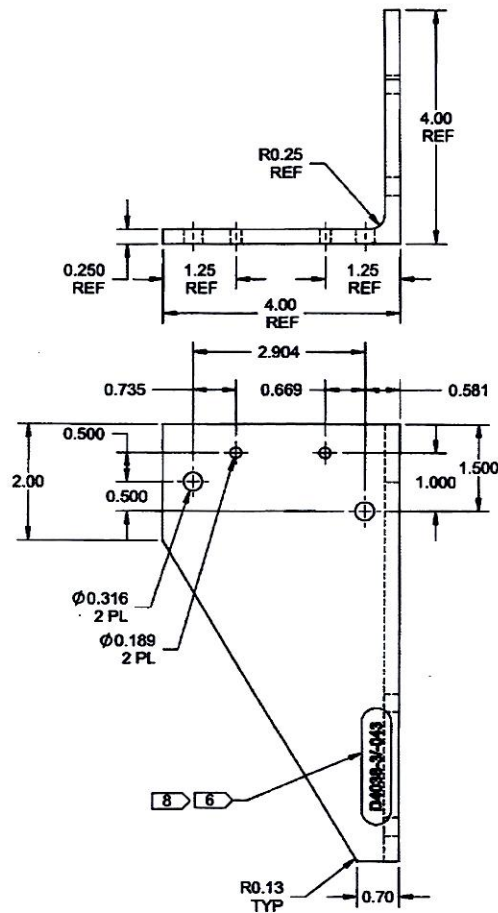
## **NOTES:**

- 1) MATERIAL: 6061-T6/T6510/T6511 ALUMINUM ANGLE, 4.000 X 4.000 X 0.250  
PER AMS-QQ-A-200/8  
REF DART SPEC M6061T6A4.000XW250
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: ENGRAVE P/N IN THIS AREA AS SHOWN (FAR SIDE ONLY) TO MAX  
DEPTH OF 0.010 IN 0.18 HIGH LETTERS WITH MIN RADIUS TOOL OF 0.015
- 7) WEIGHT: 1.03 lbs
- 8) SPOT FACE MAX DEPTH OF 0.010 PRIOR TO MARKING

**RELEASED**  
2011-04-23  
JMD

|            |                 |                                                                                                                                                                                                                                                                                                        |               |
|------------|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| DESIGN     |                 | <b>DART AEROSPACE LTD</b>                                                                                                                                                                                                                                                                              |               |
| DRAWN      |                 | HAWKESBURY, ONTARIO, CANADA                                                                                                                                                                                                                                                                            |               |
| CHECKED    |                 | DRAWING NO.                                                                                                                                                                                                                                                                                            | REV. E        |
| MFG. APPR. |                 | <b>D4038</b>                                                                                                                                                                                                                                                                                           | SHEET 4 OF 14 |
| APPROVED   |                 | TITLE                                                                                                                                                                                                                                                                                                  | SCALE         |
| DE APPR.   |                 | <b>BRACKET</b>                                                                                                                                                                                                                                                                                         | NTS           |
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# NOTES:

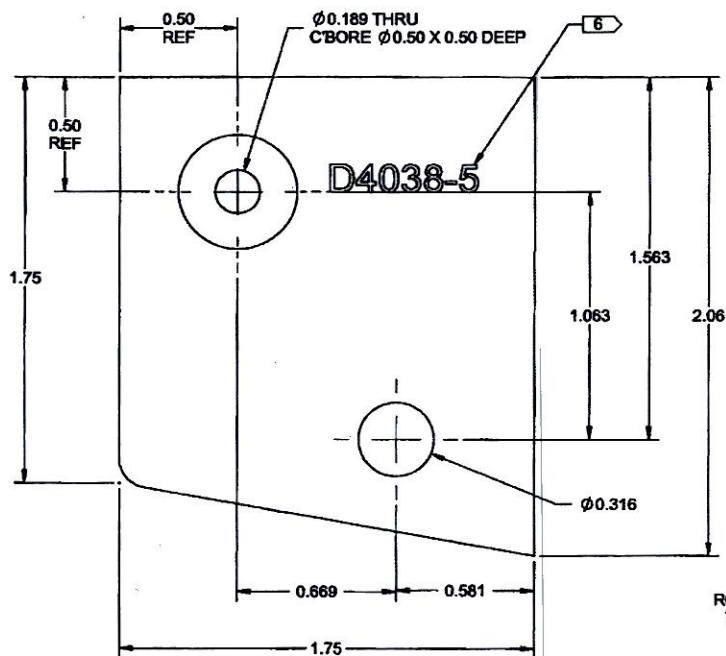
- 1) MATERIAL: 6061-T6/T6510/T6511 ALUMINUM ANGLE, 4.000 X 4.000 X 0.250  
PER AMS-QQ-A-200/8  
REF DART SPEC M6061T6A4.000XW250
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: ENGRAVE P/N IN THIS AREA AS SHOWN (NEAR SIDE ONLY) TO MAX  
DEPTH OF 0.010 IN 0.18 HIGH LETTERS WITH MIN RADIUS TOOL OF 0.015
- 7) WEIGHT: 1.18 lbs
- 8) SPOT FACE MAX DEPTH OF 0.010 PRIOR TO MARKING

**D4038-3 ANGLE, AFT, LH**

|            |          |                                                                                                                                                                                                                                                     |               |
|------------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| DESIGN     |          | <b>DART AEROSPACE LTD</b>                                                                                                                                                                                                                           |               |
| DRAWN      |          | HAWKESBURY, ONTARIO, CANADA                                                                                                                                                                                                                         |               |
| CHECKED    |          | DRAWING NO. <b>D4038</b>                                                                                                                                                                                                                            | REV. E        |
| MFG. APPR. |          |                                                                                                                                                                                                                                                     | SHEET 5 OF 14 |
| APPROVED   |          | TITLE <b>BRACKET</b>                                                                                                                                                                                                                                | SCALE         |
| DE APPR.   |          |                                                                                                                                                                                                                                                     | NTS           |
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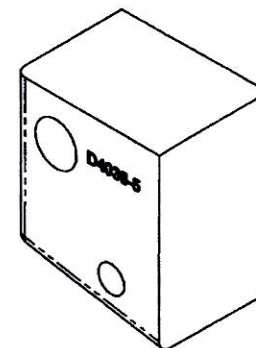
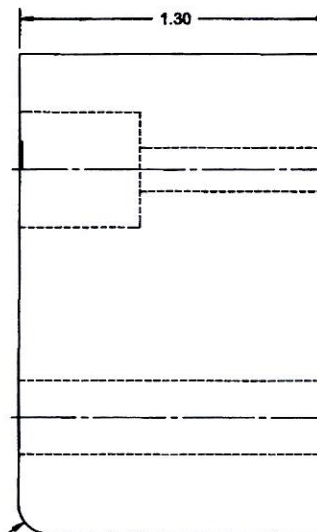
**RELEASED**  
2011-04-21  
JMT





R0.13  
TYP

**D4038-5 BLOCK**



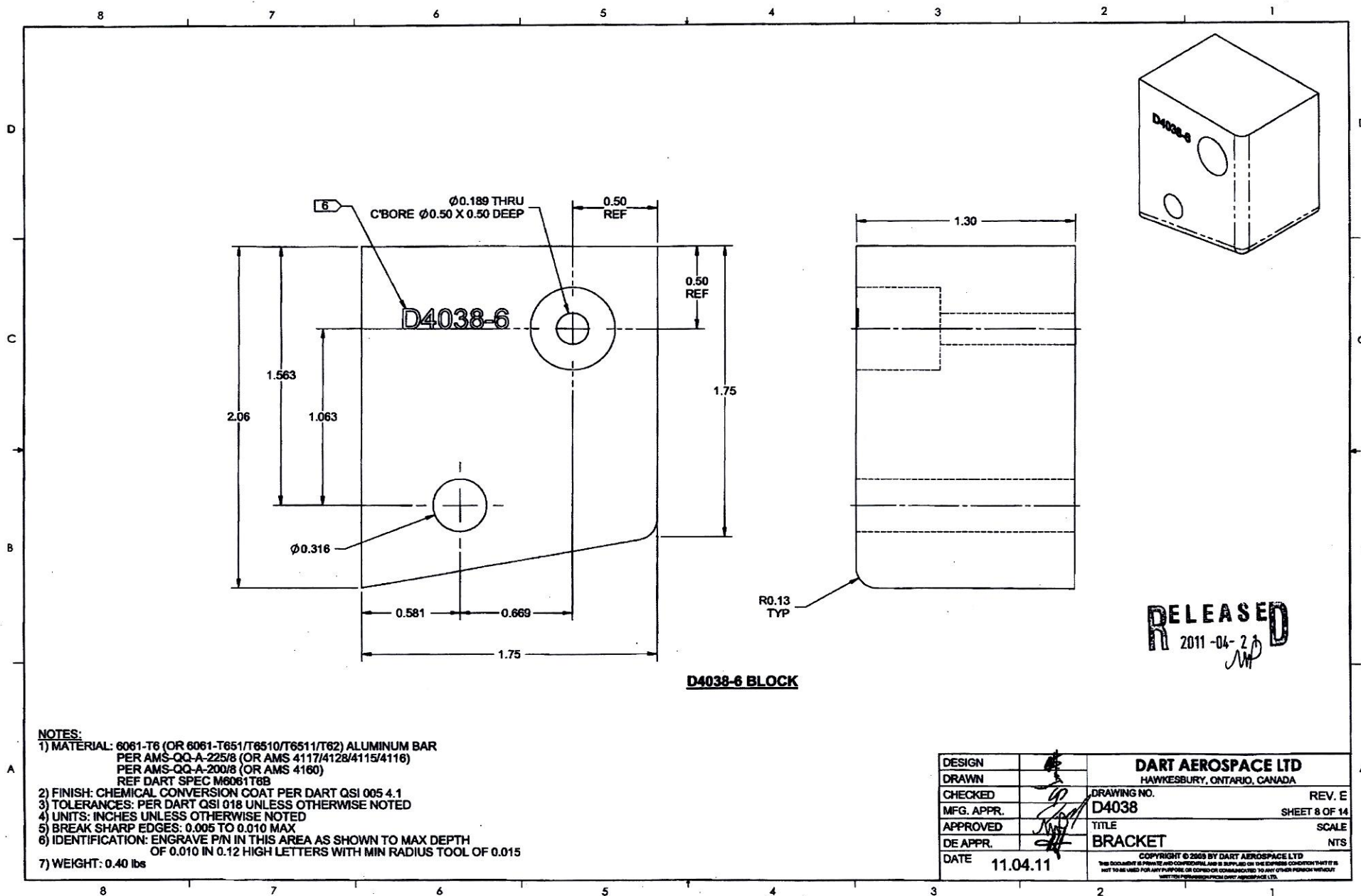
**NOTES:**

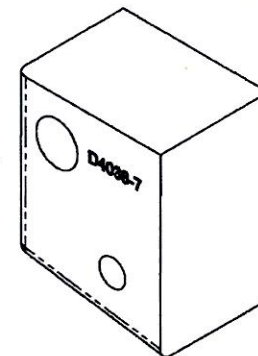
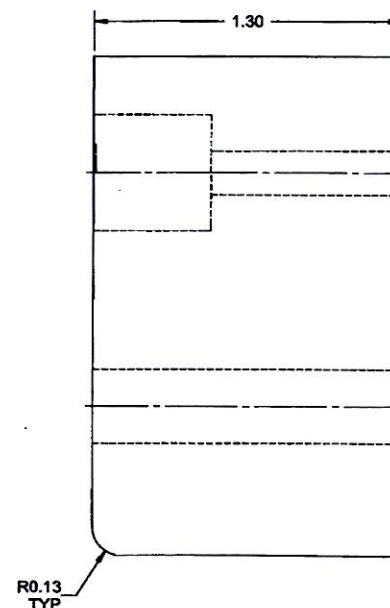
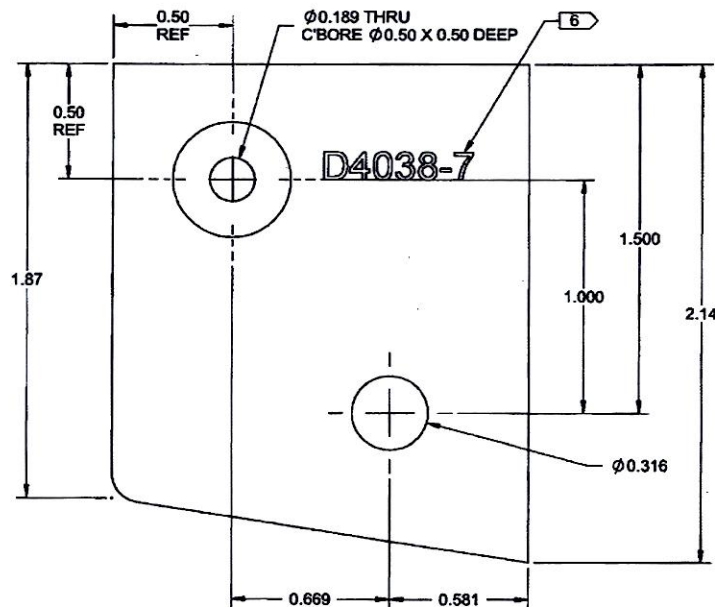
- 1) MATERIAL: 6061-T6 (OR 6061-T651/T6510/T6511/T62) ALUMINUM BAR  
PER AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116)  
PER AMS-QQ-A-200/8 (OR AMS 4160)  
REF DART SPEC M6061T6B
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: ENGRAVE P/N IN THIS AREA AS SHOWN TO MAX DEPTH  
OF 0.010 IN 0.12 HIGH LETTERS WITH MIN RADIUS TOOL OF 0.015
- 7) WEIGHT: 0.40 lbs

|            |                 |                                                                                                                                                                                                                                                                                       |               |
|------------|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| DESIGN     |                 | <b>DART AEROSPACE LTD</b>                                                                                                                                                                                                                                                             |               |
| DRAWN      |                 | HAWKESBURY, ONTARIO, CANADA                                                                                                                                                                                                                                                           |               |
| CHECKED    |                 | DRAWING NO.                                                                                                                                                                                                                                                                           | REV. E        |
| MFG. APPR. |                 | <b>D4038</b>                                                                                                                                                                                                                                                                          | SHEET 7 OF 14 |
| APPROVED   |                 | TITLE                                                                                                                                                                                                                                                                                 | SCALE         |
| DE APPR.   |                 | <b>BRACKET</b>                                                                                                                                                                                                                                                                        | NTS           |
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2011-04-11







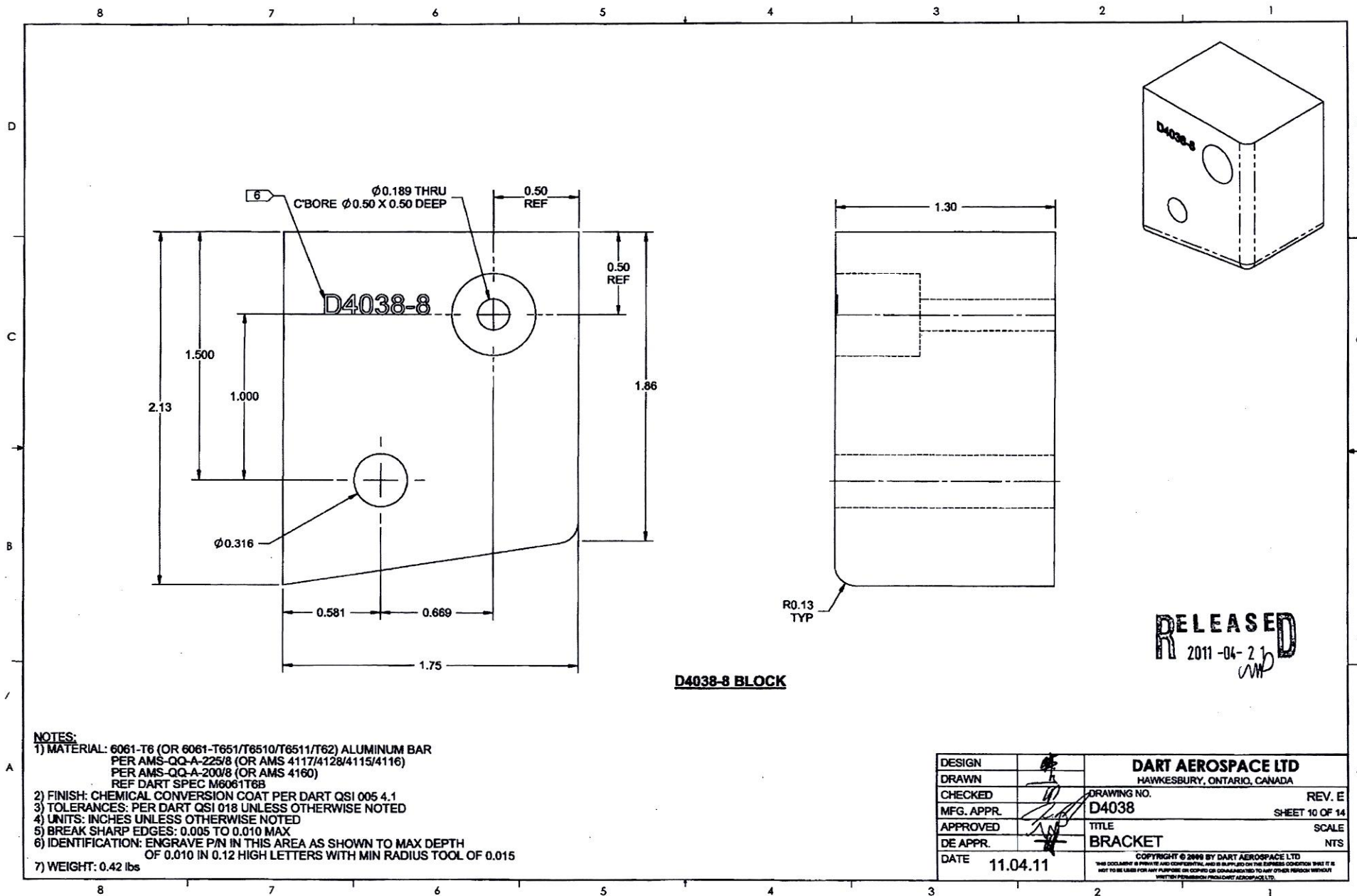
**D4038-7 BLOCK**

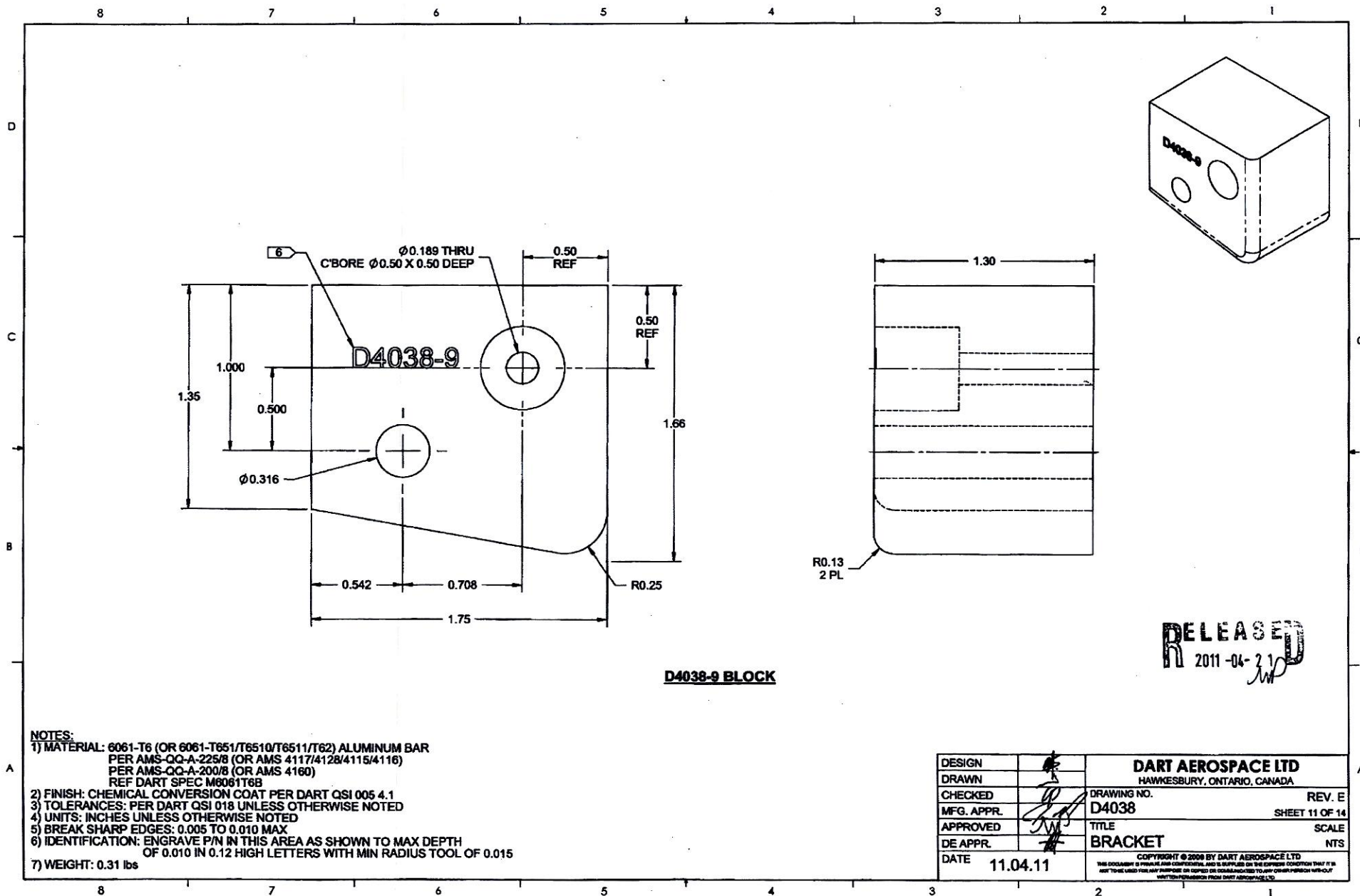
**RELEASED**  
2011-04-21  
*MP*

**NOTES:**

- 1) MATERIAL: 6061-T6 (OR 6061-T651/T6510/T6511/T652) ALUMINUM BAR  
PER AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116)  
PER AMS-QQ-A-200/8 (OR AMS 4160)  
REF DART SPEC M6061T6B
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: ENGRAVE P/N IN THIS AREA AS SHOWN TO MAX DEPTH  
OF 0.010 IN 0.12 HIGH LETTERS WITH MIN RADIUS TOOL OF 0.015
- 7) WEIGHT: 0.42 lbs

|            |                    |                                                                                                                                                                                                                                                                                                      |        |
|------------|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| DESIGN     |                    | <b>DART AEROSPACE LTD</b>                                                                                                                                                                                                                                                                            |        |
| DRAWN      | <i>[Signature]</i> | HAWKESBURY, ONTARIO, CANADA                                                                                                                                                                                                                                                                          |        |
| CHECKED    | <i>[Signature]</i> | DRAWING NO.<br><b>D4038</b>                                                                                                                                                                                                                                                                          | REV. E |
| MFG. APPR. | <i>[Signature]</i> | SHEET 9 OF 14                                                                                                                                                                                                                                                                                        |        |
| APPROVED   | <i>[Signature]</i> | TITLE                                                                                                                                                                                                                                                                                                | SCALE  |
| DE APPR.   |                    | <b>BRACKET</b>                                                                                                                                                                                                                                                                                       | NTS    |
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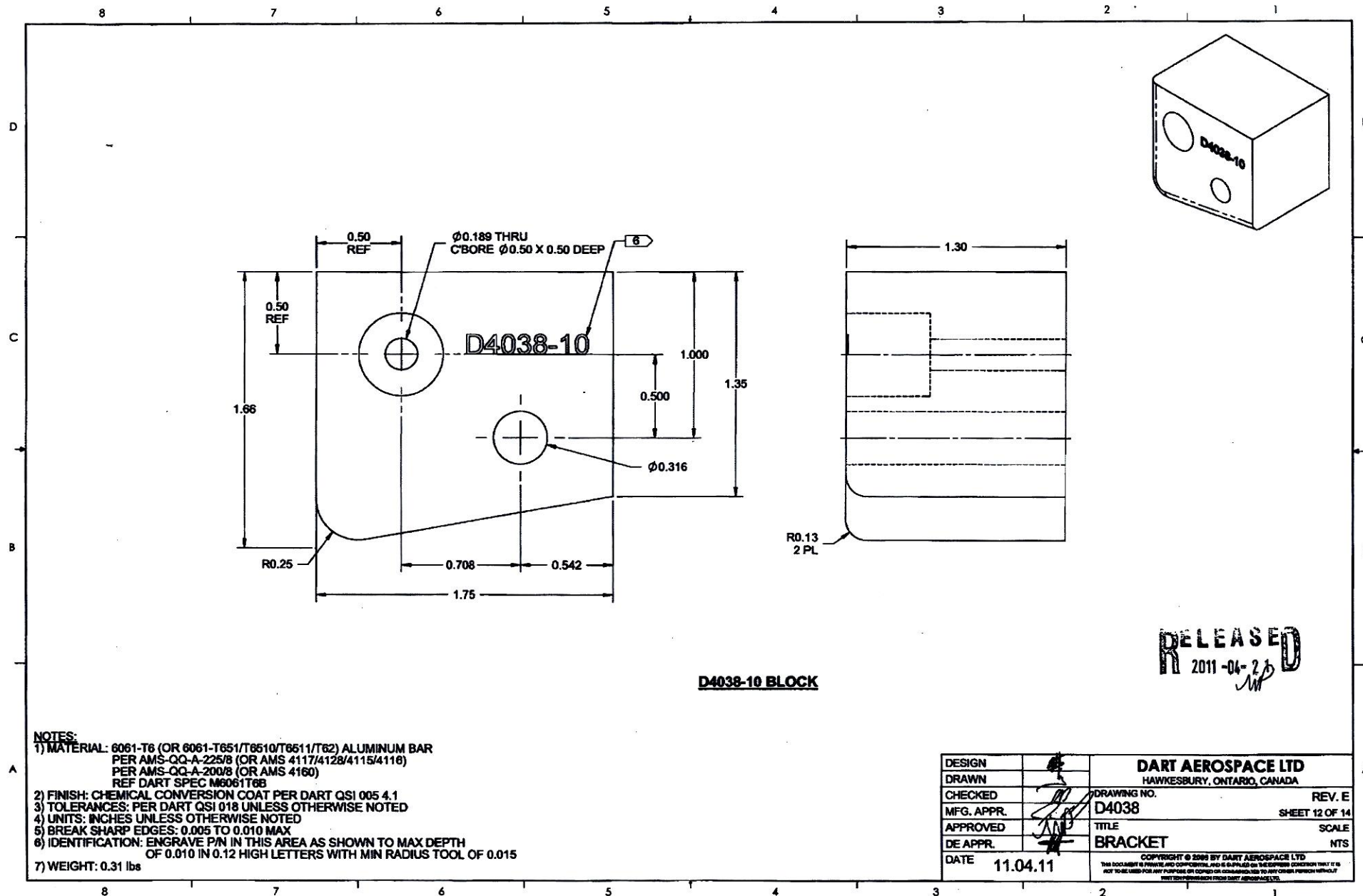


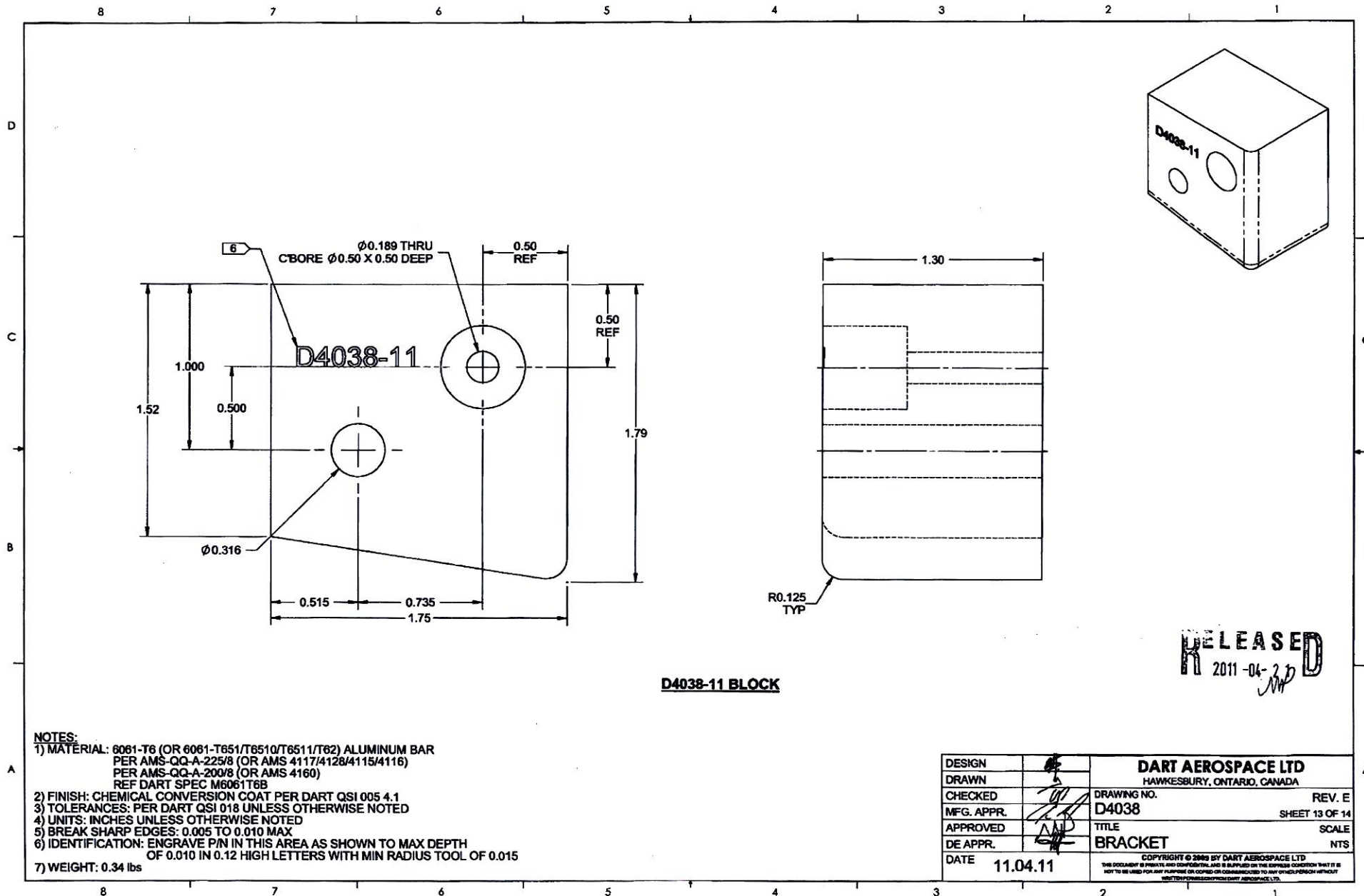


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2011-04-21

|            |          |                                                                                                                                                                                                                                                                                 |                |
|------------|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| DESIGN     |          | <b>DART AEROSPACE LTD</b>                                                                                                                                                                                                                                                       |                |
| DRAWN      |          | HAWKESBURY, ONTARIO, CANADA                                                                                                                                                                                                                                                     |                |
| CHECKED    |          | DRAWING NO.                                                                                                                                                                                                                                                                     | REV. E         |
| MFG. APPR. |          | D4038                                                                                                                                                                                                                                                                           | SHEET 11 OF 14 |
| APPROVED   |          | TITLE                                                                                                                                                                                                                                                                           | SCALE          |
| DE APPR.   |          | BRACKET                                                                                                                                                                                                                                                                         | NTS            |
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**D4038-11 BLOCK**

**RELEASED**  
R 2011-04-30

|            |          |                                                                                                                                                                                                                                                                                                      |                |
|------------|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| DESIGN     |          | <b>DART AEROSPACE LTD</b>                                                                                                                                                                                                                                                                            |                |
| DRAWN      |          | HAWKESBURY, ONTARIO, CANADA                                                                                                                                                                                                                                                                          |                |
| CHECKED    |          | DRAWING NO.                                                                                                                                                                                                                                                                                          | REV. E         |
| MFG. APPR. |          | D4038                                                                                                                                                                                                                                                                                                | SHEET 13 OF 14 |
| APPROVED   |          | TITLE                                                                                                                                                                                                                                                                                                | SCALE          |
| DE APPR.   |          | BRACKET                                                                                                                                                                                                                                                                                              | NTS            |
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